

What is Claimed is:

1. A laser-imageable and photocurable article comprising:

- 5           a) a backing;
- b) a photocurable layer on said backing having a low absorbance of radiation at a selected wavelength in the range of 300-400 nm and an initiator activatable at the selected wavelength; and
- 10           c) an ultra-violet radiation absorbing layer over said photocurable layer, said absorbing layer comprising a polymeric matrix and a dopant having a high extinction coefficient in the wavelength range of 300-400 nm,
- 15           wherein said ultra-violet radiation absorbing layer is capable of being photoablated by a laser operating at a first energy level in the wavelength of 300-400nm, and wherein unablated areas of said absorbing layer are
- 20           capable of absorbing substantially all irradiated light in the wavelength range of 300-400 nm from an ultra-violet light source operating at a second energy level lower than said first energy level;
- 25   whereby areas of said photocurable layer under ablated areas of said absorbing layer are cured, and areas of said photocurable layer under unablated areas of said absorbing layer remain uncured, upon exposure of said article to said ultra-violet light source.
- 30           2. The article of claim 1 wherein unablated areas of said absorbing layer are capable of absorbing at least 97% of irradiated ultra-violet light in the range of 300-400 nm.

3. The article of Claim 2, wherein the dopant is 2,2',4,4'-tetrahydroxybenzophenone or 2,2'-dihydroxy-4,4'-dimethoxybenzophenone.

4. The article of Claim 2, wherein said photocurable layer has a low absorbance of radiation at a wavelength of 351 nm.

5. The article of Claim 1, wherein the polymeric matrix is selected from the group consisting of polyacetals, polyacrylics, polyamides, polyimides, cellulosic polymers, polybutylenes, polycarbonates, polyesters, polyethylene, polyphenylene ethers, and polyphenylene oxides.

6. The article of Claim 1, wherein the photocurable layer comprises a photopolymer selected from the group consisting of polyurethanes and di- and tri-block copolymers.

7. The article of Claim 6, wherein the photocurable layer comprises a photopolymer selected from the group consisting of acrylate polyurethanes, acid-modified acrylate polyurethanes, amine-modified acrylate polyurethanes, acrylonitrile rubbers, di-block copolymers of styrene-isoprene, di-block copolymers of styrene-butadiene, tri-block copolymers of styrene-isoprene-styrene, and tri-block copolymers of styrene-butadiene-styrene.

8. The article of claim 1 further comprising a photocurable overcoat layer disposed between said photocurable layer and said radiation absorbing layer, said overcoat layer having a low absorbance of radiation at the selected wavelength and an initiator activatable at the selected wavelength.

9. The article of claim 7 further comprising a photocurable overcoat layer disposed between said photocurable layer and said radiation absorbing layer, said overcoat layer having a low absorbance of radiation at the selected wavelength and an initiator activatable at the selected wavelength.

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